

Test Report Workability

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Pavement Quality Concrete (M30)
Contractor	Sri. Sagar.S
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At site
Material	Concrete
Sample No	1
Date	24-Apr-2019

Sl. No.	Determination	Trial 1	Trial 2
1	Bottom Diameter(cm)	20	20
2	Top Diameter(cm)	10	10
3	Height(cm)	30	30
4	Slump(mm)	29	30
5	Average	29.5	

Comments: Maximum allowable slump as per MORT&H is 25±15mm

Note:

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For Team For You

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24/4/19
TAC 02

Test Report Concrete Compressive strength

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Pavement Quality Concrete (M30)
Contractor	Sri. Sagar.S
Test Method	IS : 4031 (part 6)-1988 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Bay
Material	concrete
Sample No	1
Date	17-Apr-2019

Cube	Concrete Grade	Age at Test (Days)	Weight (kg)	Dimension (LxWxH)	Density (kg/m³)	Max. Load (KN)	Area (m²)	Compressive Strength (N/mm²)	Avg. Sample Strength	Avg. Strength
1	30	7	7.50	150*150*150	2222.22	510	0.0225	22.67	22.92	23.19
2	30	7	7.52	150*150*150	2228.15	515	0.0225	22.89		
3	30	7	7.30	150*150*150	2162.96	522	0.0225	23.20		
4	30	7	7.70	150*150*150	2281.48	532	0.0225	23.64	23.45	
5	30	7	7.54	150*150*150	2234.07	530	0.0225	23.56		
6	30	7	7.48	150*150*150	2216.30	521	0.0225	23.16		

Results: 7-days Compressive strength of cement is 23.19 N/mm²

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AE-2

Test Report Concrete Compressive strength

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Pavement Quality Concrete (M30)
Contractor	Sri. Sagar.S
Test Method	IS : 4031 (part 6)-1988 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Bay
Material	concrete
Sample No	1
Date	8-May-2019

Cube	Concrete Grade	Age at Test (Days)	Weight (kg)	Dimension (LxWxH)	Density (kg/m³)	Max. Load (KN)	Area (m²)	Compressive Strength (N/mm²)	Avg. Sample Strength	Avg. Strength
1	30	28	8.62	150*150*150	2554.07	1162	0.0225	51.64	53.08	52.99
2	30	28	8.40	150*150*150	2488.89	1210	0.0225	53.78		
3	30	28	8.30	150*150*150	2459.26	1211	0.0225	53.82		
4	30	28	8.62	150*150*150	2554.07	1195	0.0225	53.11	52.89	
5	30	28	8.70	150*150*150	2577.78	1190	0.0225	52.89		
6	30	28	8.40	150*150*150	2488.89	1185	0.0225	52.67		

Results: 28-days Compressive strength of cement is 52.99 N/mm²

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AE-2
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BANGALORE

AE-02

Test Report Consistency test

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. Sagar.S
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At Site
Material	Cement
Sample No	1
Date	8-Apr-2019

Sl. No.	Description	Trial 1	Trial 2	Trial 3	Trial 4	Trial 4
1	Weight of Cement	400	400	400	400	400
2	Percentage of water added (%)	27	28.5	29.5	30	30.5
3	Weight of Water (gm)	108	114	118	120	122
4	Initial Reading of Plunger (mm)	40	40	40	40	40
5	Difference (mm)	19	16	11	6.5	5.5

Results: Standard Consistency of Cement: 30.50%

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Test Report Fineness test

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. Sagar.S
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At site
Material	Cement
Sample No	1
Date	8-Apr-2019

Sl. No.	Determination	Trial 1	Trial 2
1	Weight of Cement before sieve (gm)	100	100
2	Weight of residue retained on 90um sieve (gm)	4.8	3.5
3	Percentage retained (%)	4.8	3.5
4	Average Percentage retained (%)	4.15	

Results: Residue of cement is: 4.15%

Comments: Maximum allowable residue by mass for ordinary portland cement is 10%

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Chandra AE-2

Test Report Soundness test

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. Sagar.S
Test Method	IS : 4031 (Part 3) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At Site
Material	Cement
Sample No	1
Date	8-Apr-2019

Sl. No.	Description	Trial 1	Trial 2	Trial 3
1	Initial Distance between the indicator points of Lechatelier mould	11	10	11
2	Final Distance between the indicator points of Lechatelier mould	16	17	13
3	Difference or expansion	5	7	2
4	Average Differences or Expansion in mm	4.67		

Results: Difference in Expansion of Cement: 4.67mm

Comments: Maximum allowable Expansion of cement is 10mm.

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AE-2

Test Report Gradation test

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. Sagar.S
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Fine Aggregates
Sample No	1
Date	8-Apr-2019

Weight of Sample(gram): 200

Sl No.	IS Sieve Size	Weight retained	% retained	% Cumulative	Cumulative % of Passing		Remarks
					% Passing	Gradation limits	
1	10 mm	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Zone II Specification for PQC
2	4.75 mm	12	6.00	6.00	94.00	90-100	
3	2.36 mm	19	9.50	15.50	84.50	75-100	
4	1.18 mm	12	6.00	21.50	78.50	55-90	
5	600 μ	44	22.00	43.50	56.50	35-59	
6	300 μ	58	29.00	72.50	27.50	8-30	
7	150 μ	43	21.50	94.00	6.00	0-10	

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Chandra AE-2

Test Report

Water absorption test

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. Sagar.S
Test Method	IS : 2386 (Part - 3) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Coarse aggregates
Sample No	1
Date	6-Apr-2019

Sl. No.	Particulars	Computations	Test Numbers		Mean
			Test 1	Test 2	
1	Weight of SSD sample	W_1 g	761	763	
2	Aggregates Immersed in	W_2 g	2024	2022	
3	Weight of Saturated Aggregate in water	$W_{2g} = W_2 - W_1$	1263	1259	
4	dry aggregate in Air	W_3 g	2059	2047	
5	Volume of the Aggregate	$W_3 - W_2$	796	788	
6	Aggregate	W_4 g	2020	2018	
7	Specific Gravity	$W_4 / (W_3 - W_2)$	2.54	2.56	2.55
8	Apparent Specific Gravity	$W_4 / (W_4 - W_2)$	2.67	2.66	2.66
9	Water Absorption	$(W_4 - W_2) * 100 / W_4$	1.93	1.44	1.69

Comments: Maximum allowable Aggregate Water Absorption value is 2.0%.

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Chamru
TAE-02

Test Report Impact test

Project Name	Providing grill to BBMP Division office in Ward No.02 of Yelahanka Sub Division
Client	Executive Engineer, Kengeri Division
Job No	TFU/BBMP/EE/YNK/PMC/2018-19/W-2/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. Sagar.S
Test Method	IS : 2386 (Part - 4) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At Site
Material	Coarse aggregates
Sample No	1
Date	6-Apr-2019

Sl. No.	Determination	Unit	Trails	
1	Weight of empty cylinder, w1	gm	960	960
2	Weight of container filled with Aggregate, w2	gm	1300	1301
3	Weight of the Aggregate before compaction, (w2 - w1) = w3	gm	340	341
4	Weight of the sample passing through 2.36 mm IS sieves after Impact, w4	gm	79	80
5	Weight of the sample retained on 2.36 mm IS sieve after Impact, w5	gm	261	261
6	Aggregate Impact Value (w4 / w3)x100	%	23.24	23.46
7	Specified Limit	%	45.00	

Results: Average Aggregate Impact Value: 23.35 %

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